l. XI, No. 2
arch 1960

CALIFORNIA JOURNAL OF EDUCATIONAL RESEARCH

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IN THIS ISSUE:

- Grading of Advanced Placement Students
- Evaluation of an Ability Grouping Program
- Reading Ability and Perimetric Visual Field
- Current Uses of Binet and Wechsler Tests
- Achievement of 3 Academic Groups Compared

published by
CALIFORNIA TEACHERS ASSOCIATION
1705 Murchison Drive Burlingame California

CALIFORNIA JOURNAL OF EDUCATIONAL RESEARCH

Published by the CALIFORNIA TEACHERS ASSOCIATION for the CALIFORNIA ADVISORY COUNCIL ON EDUCATIONAL RESEARCH

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Published at Burlingame five times a year: January, March, May, September, and November. Subscription price: $6.00 per year; single copies, $1.50. All correspondence should be directed to: CALIFORNIA JOURNAL OF EDUCATIONAL RESEARCH, 1705 Murchison Drive, Burlingame, California. Checks should be made payable to the CALIFORNIA TEACHERS ASSOCIATION.

Certain articles in this *Journal* are listed in Psychological Abstracts.

Member of the Educational Press Association of America

Entered as second class matter at the Post Office at Burlingame, California

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CALIFORNIA JOURNAL OF EDUCATIONAL RESEARCH

Volume XI MARCH, 1960 Number 2

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THE EDITORS SAY:

Where Are We Going?

In January the editorial suggested that the *CJER* should have a goal of publishing manuscripts which would provide answers to educational problems. Few complex educational problems have been solved by a single study, yet individual research projects often may give clues to better understanding. The March *CJER* illustrates a way in which a journal may share in the solution of difficulties.

For example, one of the most pressing issues today is the grading of able high school students in accelerated classes. In this issue Robert Shutes has stated the dilemma pointedly—the letter grade received by the student threatens to be the main criteria for admission to college. Readers will be interested in the procedure one district used to gain insight into this problem.

An entirely different area, but equally as controversial, is the method of grouping students. William Savard has described the results of a district's experimentation with the popular "limited-range-grouping." School personnel, who have unequivocally pronounced that this technique is the best way to provide for the academically talented, may be shocked at his findings.

For those readers with interests at the collegiate level, Donald Harder has released his second report of a longitudinal study of students' progress through a university. At a time when the country needs all available brainpower, Dr. Harder notes, nearly half of the students who should be among the most productive are being lost through "drop outs."

These studies are illustrative of the fulfillment of the goal to which the *CJER* should strive. College admission requirements, grouping of students, or collegiate attrition problems have not been solved, but the studies just described have added something to the existing knowledge in these areas.

So, it is with a sense that perhaps the *CJER* is heading for the right objective that the March issue is released. The drudgery of selecting manuscripts, writing rejection letters, editing, typing, proof reading, pasting up dummies, and even resolving differences of opinions between the editors and the authors—all these may we worthwhile.—JHB

Dilemmas In Grading Advanced Placement Students

ROBERT E. SHUTES

The ablest high school students in school today are faced with the unpleasant choice of pursuing accelerated learning in an advanced program or high grades in a regular one. Either way they may jeopardize their chance for acceptance by the college of their choice or their chances for scholarships. According to some college admissions offices,[1] most applicants for admission now present a high school record which shows some advanced courses. Students without such courses on their high school records thus enter the competition for admission at a disadvantage. On the other hand, college demands for ever higher academic averages make students and their parents reluctant to risk lower grades in special courses where standards are higher and competition is stiffer. At the moment, the letter grade threatens to be king. Schools and colleges must resolve this dilemma soon, or most students will decide it is saner to be average—safer to be an A+ loafer than a B+ scholar.

In an attempt to protect the college admission and scholarship opportunities of Advanced Placement (AP) students in its schools, the Palo Alto Unified School District conducted a survey in December, 1959, of the relevant admissions policies and practices of selected colleges and universities to which members of the AP English class at Palo Alto High School intended to apply. Of the 21 institutions polled, 17 replied at length to the questions posed. These were: University of California at Berkeley, Cornell, Michigan State, Mills, Mt. Holyoke, Pomona, Radcliffe, Reed, San Jose State, Sarah

[1]Pomona and Radcliffe comment directly to this effect; undoubtedly other private colleges and universities are having similar experiences.

Robert E. Shutes is a Research Consultant for the Palo Alto Unified School District and serves as coordinator of the district's gifted child program. Before assuming this position two years ago, Mr. Shutes served the district as building coordinator of the advanced standing program and was the chairman of a junior high school English department. Mr. Shutes obtained his A.B. degree from Yale in 1948 and his M.A. degree from Stanford University in 1951. He is currently engaged in his doctoral program at Stanford.

Lawrence, Smith, Stanford, Swarthmore, Harvard, Princeton, Yale, and Foothill (Junior) College. Five questions were asked in the survey:

1. Does your institution recognize the Advanced Placement Program and give advanced placement and/or college credit to qualified students?

2. Is any special attention given the application of students who have participated in advanced programs in high school? If his transcript clearly indicates some advanced courses, will you give a student more favorable consideration or his application more careful review than you would if his record did not indicate such work?

3. Do you apply any differential to grades made in accelerated courses, particularly senior courses, as you assess the value of a student's high school accomplishment? If you do, do you have an established ratio which you apply, or do you follow the recommendation of the school which supplies the transcript?

4. Specifically in relation to senior (i.e., college level) Advanced Placement courses, do you assume that grades assigned are based on college or on high school standards? If a student receives a semester C or D in a college-level course, will his admission to your institution be jeopardized?

5. Which standard would you prefer be used in grading senior Advanced Placement students, the college standard or the high school standard?

Summaries of the responses follow:

Question 1. All seventeen institutions recognize the Advanced Placement Program and grant advanced placement to qualified students. (This is true of all the subject areas for which Advanced Placement examinations have been prepared, except at Mills College, where only English and Foreign Language are considered for Advanced Placement.) Only Mills, Sarah Lawrence, and Smith do not grant credit at the present time.

Question 2. At all except state colleges and universities (whose admission policies are governed by law), special attention is given the applications of Advanced Placement students. There was some indication, however, that the increasing volume of applications is making it ever more difficult to accord this special attention. All except state institutions tend to give some preference to Advanced Placement students, though neither Pomona nor Smith does this automatically. The admissions office at Smith pointed out that the regular program in one school may be every bit as strong as an Advanced Placement Program in another.

Question 3. All except state colleges and Smith College apply some kind of differential to grades made in Advanced Placement courses, but no college uses a specific ratio. Of those who do apply a differential, only Princeton offered no comment to the effect that the differential applied would be as the high school directed. Smith College does not apply a differential but

does try to relate the grade to the course.

Question 4. Assumptions about the grading standards used in high school Advanced Placement courses show wide variation. Responding colleges are grouped below according to the nature of their replies to this item.

Assume college standard used:	**UC, Michigan State, Harvard, Yale**
Assume high school standard used:	**Pomona, San Jose State, Stanford**
Rely on school to indicate:	**Mills, Radcliffe, Sarah Lawrence, Reed, Foothill**
Assume standard is different:	**Mt. Holyoke, Swarthmore**
Review each case; base decisions on AP Exams:	**Cornell, Smith, Princeton**

The following colleges felt that C's and D's in Advanced Placement courses, even based on college standards, would jeopardize admission to their institution and advised students making those grades to transfer: Mt. Holyoke, Pomona, San Jose State, Smith, Stanford, Swarthmore, and Yale. Mills and Radcliffe felt that admission might be jeopardized, but were opposed to students dropping back to easier work. Cornell, Michigan State, Mills, and Sarah Lawrence advised students not to drop back to easier work, regardless of grades. Reed College questioned the severity of such grades in a selected class.

Question 5. The several colleges vary as much in their preference of the standard to be used in Advanced Placement courses as they do in their assumptions about which standards high schools actually use. Michigan State, Harvard, Yale, and Foothill College preferred the college standard. Mills, Pomona, San Jose State, Sarah Lawrence, Stanford, and Swarthmore preferred the high school standard. Mt. Holyoke, Radcliffe, and Reed suggested an intermediate standard different from high school standards but not necessarily of a college level. All strongly request explicit information as to exactly how students have been selected for the course and what standard has been used in grading them.

Implications for Schools

Despite conflicting responses to several items in the questionnaire, there are some clear implications from the survey which high schools might well note.

1. The growth of the Advanced Placement Program in high schools throughout the country will make it increasingly difficult for top students to compete for college admission (at least in the private institutions) unless they have some such courses on their record.

2. Students who successfully complete Advanced Placement work in high school can be increasingly confident about getting advanced placement

and/or credit when they reach college. Several institutions report that they are increasing the amount of credit which is allowable, and others report no limitation in this regard.

3. Colleges would prefer that more rigorous standards be used in special courses, though they cannot agree on precisely what those standards should be. Thus, high schools should clarify with their own staffs the exact standards they are going to use and be able to describe those standards unambiguously to colleges.

4. Because of the general uncertainty of college interpretation of high school records, high schools must protect their graduates from being penalized for taking more advanced work. This can be done by developing realistic grading practices in advanced courses and by providing colleges with full information about the courses themselves.

5. High schools and colleges are mutually concerned about inconsistencies in the recording and interpretation of high school records. Apparently each level has an obligation to improve this situation; the secondary schools by improving the clarity and precision with which they communicate to colleges the records of their graduates, and the colleges by making their policies and practices clearer to the schools.

Recommendations

The following recommendations concern solutions to the present dilemma:

1. High schools must develop a notation for use on transcripts which clearly identifies every advanced course. In the interest of consistency, AP is suggested for an Advanced Placement course, and Honors for all others.

2. Some additional notation, either on the transcript or attached to it, should call college admission officers' attention to the AP or accelerated student.

3. In an attachment to the transcript, the high school should provide the college with certain specific pieces of information about the special classes in which the student has participated. These should include: (a) the number of students in the special class; (b) the per cent of the graduating class represented by the students in item *(a)*; (c) the criteria on which students were selected for the program; (d) the precise manner in which the special course differs from the regular course; (e) the basis on which grades were assigned in the course; and (f) the manner in which the school wishes the college to interpret these grades in relation to other grades assigned by the school.

4. High schools should use the safest, most conservative standard for

grading advanced pupils. This would be most appropriately based on the high school standard, although an express differential may be applied. Because of the high degree of selectivity exercised in choosing the class, it is reasonable to expect that at least half and probably closer to 80 per cent of assigned grades will be A. Colleges can equate the grades earned in a special class to their own standards by reading the Advanced Placement Examinations.

5. Individual differences in accomplishment within the special class should be specified in letters of recommendation or on the special sheets filled out for each Advanced Placement student by each AP teacher.

6. High schools should clarify individual problems by communicating directly with the colleges to which Advanced Placement (or honor) students apply.

7. Every effort should be made to establish consistency of action, both among colleges and among high schools, so that mechanical details do not stand in the way of an improved instructional program. This can be fostered through action at conferences and conventions, through official publications and professional journals, and through recommendations to and from the national office of the Advanced Placement Program, the College Board, the NASSP, et al.

During the next few years, school and college officials will have to exert special effort to reach a common and comfortable ground if a high academic average is not to become more important to the high school student than a substantially improved preparation for college.

A Firsthand Report on Soviet Schools **has been released by the National Education Association. This report is based on the examination of Soviet education by a group of 64 American school administrators who visited the Union of Soviet Socialist Republics in October 1959. The 63-page description is a distillation of the findings and is based on careful note-taking, discussions, seminars, and participation in committees. The Soviet organization was examined in regard to administration, finance, curriculum, extra-curricular program, special services, teacher education, professional status of teachers, buildings and equipment. Californians in the group were: James Corson, Executive Secretary, CASA; Ivan Crookshanks, College of the Sequoias; Paul Ehret, San Lorenzo; Jack Rees, Hayward; and C. C. Trillingham, Los Angeles County.**

An Evaluation of an Ability Grouping Program

WILLIAM G. SAVARD

This report summarizes an empirical evaluation of an experimental program of ability grouping in grades four through eight in the Burlingame (California) School District. The program is called "limited-range grouping" because it limits the range of ability found in any one classroom. The membership of each limited-range class consists of average children plus a small group of either above-average or below-average children; classes are described as being "upper-range" or "lower-range."

The Burlingame School District attempted this type of grouping, because it seemed to be a reasonable compromise between highly "homogeneous" grouping and the extremely wide span of ability found in a typical heterogeneous class. Limited-range grouping plans also have been conducted in San Bruno Park and Glendora in California, and the Tarrytowns, New York. The Tarrytowns' program, called "balanced grouping," has been reported, but no empirical evaluation was offered.[1]

Limited-range grouping was not proposed as a panacea. The general expectation was that such grouping might offer the teacher a more manageable teaching situation by removing the extremes in the span of achievement that do exist while presumably maintaining the advantages that are claimed for heterogeneity.

Procedure

Approximately 1200 children of grades 4 through 8 were included in the limited-range-grouping program in Burlingame. Limited-range groups were established whenever two or more classes of a grade were found in

[1]Arthur R. Brinkman, "The Tarrytowns Try Balanced Grouping," *The Elementary School Journal*, Vol. 59, No. 6 (March 1959), p. 320.

William G. Savard is Research Assistant in the School of Education, Stanford University. He was formerly Director of Educational Guidance in the Burlingame School District, at which time he conducted the research described in the article. Mr. Savard is currently engaged in research on school-community relations, in a project for the U.S. Office of Education being conducted at Stanford University. Mr. Savard's educational background includes an A.B. degree from the University of Massachusetts, and an M. Ed. degree from Springfield College in Massachusetts.

a school. In grades 4, 5, and 6, class groups were established on the primary criterion of the average reading score yielded by previous Stanford Achievement Tests. Secondary criteria were intelligence test scores, report card grades, and other information accumulated in the permanent record folders, although principals reported that it was seldom necessary to refer to these secondary criteria. In grades 7 and 8 the primary criterion was the battery median score on the Stanford Achievement Test. The range on these criteria was held to between two and three years. Overlap in range between classes of the same grade was from two to three years.

Purpose of the Study

The purpose of the study was to assess the effects of limited-range-grouping on growth in reading and arithmetic, as measured by the Stanford Achievement Test. While the expectations for the program extended beyond these two skill areas, the present report is restricted to them. The specific sub-tests used were Paragraph Meaning, Word Meaning, Arithmetic Reasoning, and Arithmetic Computation. The following questions were posed for inquiry:

1. How do gains made by limited-range classes (formed on the basis of past achievement of pupils) compare with gains made by the same subjects during the previous school year under usual (heterogeneous) class groupings?

2. Is there any relationship between the effects of limited-range grouping and intelligence?

Grade placement scores (which are not equal units) were converted into the K scale scores[2] of the Stanford Achievement Test, in order to provide comparable units of growth at different grade levels.

It was necessary to compare ten months' growth under heterogeneous grouping with seven months' growth under limited-range-grouping, since the program was initiated in September and testing was done in April. Further, the first few months in the autumn of 1958 are not directly comparable to the first few months of the autumn of 1957, in that the teachers had not yet developed an instructional program specifically adapted to limited-range grouping. This comprises a limitation on the test of limited-range grouping and would increase the meaningfulness of any obtained differences in favor of limited-range grouping. The present study was not designed until after the grouping program was instituted. Because of this, some variables could not be controlled as adequately as would otherwise

[2]Eric F. Gardiner, "The Determination of Units of Measurement Which Are Consistent with Inter and Intra Grade Differences in Ability," *Harvard Educational Review, XIX*, No. 2 (Spring 1949), pp. 123-124.

be possible. The evidence presented here is the result of a procedure devised under field conditions and with limited resources.

The Sample

The sample was drawn, during the month of September 1958, from upper- and lower-range classes in grades 5, 6, 7, and 8, which represented, *in toto*, a normal distribution of ability and which involved teachers with the following characteristics:

1. **Had taught the same grade during the previous school year.**
2. **Were committed to the limited-range grouping program.**
3. **Had definite programs for helping the upper- or lower-range groups.**
4. **Were willing to undergo this inquiry.**

The sample classes were chosen with the help of building principals and the curriculum consultants, in light of the foregoing criteria. During the course of the school year, nine children of the original sample were lost due to transfer. The final sample as of April 29, 1959 consisted of 14.75 per cent of the children in limited-range classes in grades 5 through 8. Tables I and II summarize the pertinent characteristics of this sample.

TABLE I

Frequency Distribution of Sample, by Grade, Intelligence Test Score Category, and Type of Grouping

		Intelligence Test Score Category					
	GRADE	$\leq -1SD$	$\bar{X}$ to $-1SD$	$\bar{X}$ to $1SD$	$1SD$ to $2SD$	$\geq 2SD$	TOTAL
Upper Range Classes	5		6	4	7	1	18
	6	1	4	7	1	1	14
	7	1	7	16	4	1	29
	8			16	4	2	22
	Sub-Total	2	17	43	16	5	83
Lower Range Classes	5	2	8	6	2		18
	6	5	3	2	2		12
	7	13	6	2			21
	8	3	16	3			22
	Sub-Total	23	33	13	4		73
	TOTAL	25	50	56	20	5	156

TABLE II

Distribution of Intelligence Test Scores for Sample Compared to Normal Distribution (In Per Cent)

	Intelligence Test Score Category					
	$\leq -1SD$	$\bar{X}$ to $-1SD$	$\bar{X}$ to 1SD	1SD to 2SD	$\geq 2SD$	TOTAL
Normal (%)	16.0	34.0	34.0	14.0	2.0	100.0
Actual (%)	16.0	32.0	35.9	12.8	3.2	99.9

Results

Relative Effects of Limited-Range Grouping

Table III presents the data relevant to the comparison of pupil gains under limited-range-grouping and their previous gains under heterogeneous grouping. It can be seen that pupils in upper-range-limited-grouping, when their previous gains under heterogeneous grouping were compared, showed a significant advantage only for the test area of Arithmetic Reasoning. In the case of the lower-range-limited classes, however, there was a significant advantage in three of the four test areas. It may be reasonable to conclude that limited range grouping tends to be effective under lower-range conditions and of less advantage in upper-range situations.

TABLE III

Relative Gains, in K Score Units, Made by Limited-Range Classes

		Sub-Test			
	Type of Grouping	Paragraph Meaning	Word Meaning	Arithmetic Reasoning	Arithmetic Computation
All Upper Range Classes N=83	Limited-Range	6.2	7.3	12.3	15.2
	Heterogeneous	6.0	9.5	9.1	18.0
	Difference	.2	−2.2	3.2*	−2.8
All Lower Range Classes N=73	Limited-Range	6.7	4.1	13.2	9.1
	Heterogeneous	2.9	5.8	8.3	4.9
	Difference	3.8**	−1.7	4.9**	4.2*

*P≤.01
**P≤.001
A positive difference favors limited-range grouping.

Analysis by Intelligence Levels

Table IV summarizes the comparisons of limited-range and heterogeneous grouping at each of five levels of measured intelligence. It can be seen that limited-range-grouping is more effective at lower intelligence

TABLE IV

Relative Gains in K Score Units Made by Children in Various Intelligence Score Categories

Intelligence Test Score Category	Type of Grouping	Sub-Test			
		Paragraph Meaning	Word Meaning	Arithmetic Reasoning	Arithmetic Computation
≥2SD N=5	Limited-Range	6.9	5.9	9.0	22.2
	Heterogeneous	8.1	6.5	13.7	22.8
	Difference	−1.2	−.6	−4.7	−.6
1SD to 2SD N=20	Limited-Range	5.2	9.3	12.9	17.5
	Heterogeneous	7.1	7.5	8.8	16.4
	Difference	−1.9	1.8	4.1	1.1
$\bar{X}$ to 1SD N=56	Limited-Range	6.3	6.1	12.7	15.4
	Heterogeneous	4.9	9.5	8.9	16.1
	Difference	1.4	−3.4*	3.8**	−.7
$\bar{X}$ to −1SD N=50	Limited-Range	7.9	5.1	9.9	13.4
	Heterogeneous	3.5	7.1	6.0	13.1
	Difference	4.4**	−2.0	3.9*	.3
≤−1SD N=25	Limited-Range	4.4	3.9	8.3	11.4
	Heterogeneous	2.9	4.7	3.8	5.4
	Difference	1.5	−.8	4.5**	6.0**

*P≤.05
**P≤.01
A positive difference favors limited-range grouping.

levels and decreasingly effective as one moves up the scale. This is consistent with the findings reported in Table III. This finding must be offered with caution, however, since it is possible that the Stanford Achievement Test does not have enough "ceiling" to assess gains among the extremely high achievers.

Reading Ability And Perimetric Visual Field

JIN ONG, KENNETH SCHNEIDER, AND JOSEPH MORAY

A number of studies have attempted to relate the size of the visual field to reading. Gray (2), using a perimeter to measure peripheral vision, noted no differences in the peripheral vision of an unspecified number of good and poor readers. Harris (3), in a study of about 30 subjects in each grade from 2nd to 8th, used the perimeter to measure peripheral vision. Although "visual form span"[1] was not significantly associated with the breadth of the recognition unit employed in continuous reading, his data showed that the horizontal field sizes tended to increase from the 2nd grade on, stabilizing at about the 5th grade level.

On the other hand, Hincks (4), in a case study of 15 children who had difficulty in learning to read, found that most of the subjects had "a very limited peripheral vision." While the perimeter was used to measure the field of vision, this study presents no data and speaks of no control group. Another study by Eames (1) suggested that restriction of the visual field was a handicap in reading. Using the campimeter to measure the visual fields of 85 "educational disability" cases, 40 unselected and 12 normal pupils, he found the "educational disability" cases tended to have smaller visual fields. Unfortunately, however, the Eames report lacks data regarding the extent of the visual field and the "educational disability." Of the studies cited, only Harris presents data to support his conclusions.

[1]"Visual form span" is defined as "combined range of vision for the left and right eye on the horizontal axis as measured by a subject's ability to clearly perceive the corners of a standard five-millimeter square white target (3:86)."

Jin Ong is a graduate research psychologist currently working at the Institute of Human Development in a project supported by a Carnegie Foundation Research Grant, at the University of California, Berkeley. A graduate of the School of Optometry, U.C., in 1953, Dr. Ong also obtained his M.S. degree in education from the University of Southern California in 1956.

Kenneth Schneider is an assistant principal in the San Francisco Unified School District, a position he has held for three years. Mr. Schneider, who taught in the same district's elementary schools for six years, obtained his M.A. degree from the University of California, Berkeley, in 1955.

Joseph Moray is currently on leave from the San Lorenzo Elementary School District, where he has taught for six years. Mr. Moray, who previously taught in Pleasanton and San Francisco, is a graduate of Philadelphia Normal School and obtained his B.E. degree in 1952 from San Francisco State College.

The authors, all of whom are currently graduate students at the University of California, Berkeley, express their appreciation to Professor Jack A. Holmes of that institution "for his advice and criticism of this experiment."

Of particular interest is the tendency reported by Eames for greater differences to be found among the left eye visual fields for the "educational disability" cases and the unselected or normal cases. The following questions seem pertinent. Is there a significant difference between the left eye visual fields and right eye visual fields? Is there a significant sex difference in the perimetric field sizes? And, are such differences, if they exist, related to reading ability?

The Problem

The present study had two general purposes: first, to investigate the characteristics of the perimetric peripheral visual fields of children at the 5th and 6th grade levels; and, second, to relate the field sizes to a number of selected factors.

Specifically, the following null hypotheses were tested:

1. There is no sex difference in the size of the peripheral fields.

2. There is no difference between the size of the peripheral fields for the right and left eye.

3. There are no significant relationships between the width of the horizontal peripheral visual fields and power, or speed of reading.

4. There are no significant relationships between the width of the vertical peripheral visual fields and power, or speed of reading.

5. There are no significant relations between I.Q. and size of peripheral fields.

Apparatus and Tests

Scores from *California Reading Achievement Tests* were used as measures of the power of reading. The *California Short-Form Test of Mental Maturity* was used to obtain I.Q.'s. Speed of reading was assessed on an experimental test, constructed from easy third grade social studies material. The corrected split half reliability was .97. A true-false test on the material indicated that at least 80 per cent of the questions were answered correctly by all students.

A commercial perimeter, with a fixation radius of 330 mm., was used to measure the peripheral field of vision (7). A 152 mm. wide band semicircular arc, graduated in degrees along the top edge, was lined on the concave side with black felt. At the center of the arc was a 5 mm. diameter white fixation point. Illumination was by an attached overhead 100 watt blue Mazda bulb. A 1 mm., Bausch and Lomb, white plastic test target, Cat. No. 71-57-50-01, was used.

Procedures

A total of 155 pupils selected from one school in San Lorenzo and one school in San Francisco were measured by the perimeter in the following manner: the order was BGGBBGGB, etc. The B's were the boys and the G's were the girls. The parallel order was used for the right and left eye; that is, the right eye was tested first on "B," the right eye was tested first on "G," and the left eye was tested first on the next "G," and the next "B," and so on. One eye was tested at a time, the other being effectively occluded. Three or four subjects were waiting and watching in the testing room while each subject was being tested. The subject was instructed individually to fixate at all times on the fixation point at the center of the arc, and at the same time to notice the 1 mm. white target 10 to 20 degrees from the fixation point. The subject was instructed to say "Out" at the point when the target moved out of his visual field, and "In" when he saw something white as it moved into his visual field. The position of the target when the subject said "In" was noted in degrees of arc from the fixation point. Trials were continued until a constant value for each meridian measured was reached. The subject's eyes were watched and the instructions were repeated if the eyes deviated from the fixation point. In order to reduce testing time, only the horizontal and vertical meridians of the fields were tested. They were recorded as lateral, nasal, upper, and lower in degrees of arc for the right and left eyes separately. One experimenter (Jin Ong) did all perimetric measurements.

The California Reading Achievement Test was administered to the entire 6th grade—39 boys and 43 girls—in the San Lorenzo school, and the speed of reading tests were administered to the 6th grade pupils of both schools. *The California Mental Maturity Test* had been given in the preceding term.

Results and Discussion

The females excel the males almost one grade level in power reading (8th grade vs. 7th grade); about 20 words per minute in speed reading (255 vs. 234 words per minute); and about four points in I.Q. (111 vs. 107). Their chronological ages, however, are comparable (11 years 8 months vs. 11 years 7 months).

Table I gives the differences between means of the visual fields of males and females. For example, the means of the *lateral* visual fields are about 83 degrees for the *male* right eye and left eye and about 80 degrees for *female* right and left eye. These differences are significant at better than the .05 level of confidence. The mean of the difference between means (Mean of D_M) of males and females for both the horizontal and vertical meridians of right and left eyes combined is 1.83.

TABLE I

A Comparison of Mean Sex Differences of the Directional Dimensions for Visual Fields in Each Eye. (Male N=79; Female N=76)

Right Eye Fields

Directions	Sex	Mean	σ	σ_m	σ_{d_M} †	D_M ††	t	P
Lateral	M	82.97	5.50	.62	1.04	3.08	2.96	<.05
	F	79.89	7.24	.83				
Nasal	M	52.74	5.18	.58	.91	2.19	2.40	<.05
	F	50.55	6.03	.70				
Upper	M	45.26	5.51	.62	.97	2.13	2.18	<.05
	F	43.13	6.46	.74				
Lower	M	54.51	5.82	.66	1.04	1.78	1.71	N
	F	52.73	7.01	.81				

Left Eye Fields

Directions	Sex	Mean	σ	σ_m	σ_{d_M} †	D_M ††	t	P
Lateral	M	82.25	6.34	.72	1.08	2.37	2.19	<.05
	F	79.88	7.00	.81				
Nasal	M	52.59	5.21	.59	.94	−0.46	−.49	N
	F	53.05	6.31	.73				
Upper	M	45.02	5.44	.61	1.01	.84	.84	N
	F	44.18	6.89	.79				
Lower	M	55.26	6.05	.68	1.12	2.74	2.44	<.05
	F	52.52	7.63	.88				

Mean of D_M *=1.83

†σ_{d_M} = Standard error of difference between uncorrelated means.

††D_M = Difference between uncorrelated means, (−) minus sign means female field is larger.

*Mean of D_M = Combined horizontal and vertical meridians for right and left eye difference between means.

Table II indicates that the differences between means of right and left eye fields of males and females are generally insignificant. Also the correlation between the right and left eyes on the nasal direction is very low (0.14 for males and 0.36 for females). Such low correlations, which might have been caused by the physical feature such as the nose and its accurate positioning during measurement, may explain the big difference (–2.50) between the female right and left eyes in the nasal direction.

TABLE II

A Comparison of Mean Differences for the Directional Dimensions of the Right and Left Visual Fields for Each Sex. (Male N = 79; Female N = 76)

Males

Directions	Eye	Mean	σ	σ_m	r	σ_{d_M} †	D_M ††	t	P
Lateral	R	82.97	5.50	.62	.61	.60	.72	1.20	N
	L	82.25	6.34	.72					
Nasal	R	52.74	5.18	.58	.14	.77	.15	.19	N
	L	52.59	5.21	.59					
Upper	R	45.26	5.51	.62	.62	.54	.24	.45	N
	L	45.02	5.44	.61					
Lower	R	54.51	5.82	.66	.62	.59	.75	1.27	N
	L	55.26	6.05	.68					

Females

Directions	Eye	Mean	σ	σ_m	r	σ_{d_M} †	D_M ††	t	P
Lateral	R	79.89	7.24	.83	.64	.70	.01	.01	N
	L	79.88	7.00	.81					
Nasal	R	50.55	6.05	.70	.36	.80	−2.50	−3.11	<.05
	L	53.05	6.31	.73					
Upper	R	43.13	6.46	.74	.62	.69	−1.03	−1.53	N
	L	44.18	6.89	.79					
Lower	R	52.73	7.01	.81	.68	.68	.21	.31	N
	L	52.52	7.63	.88					

† σ_{d_M} = Standard error of difference between correlated means.

†† D_M = Difference between correlated means, (−) minus sign means female field is larger.

Table III gives the correlations of power reading, speed reading, and I.Q. with visual fields. Inspection will show that out of 46 correlations only four exceed .30. The male nasal right and left correlate −.32 and −.45 respectively with power reading, and female right lateral correlates .34 and left upper .34 with I.Q. Since the correlation between the male nasal right and left eyes is an extremely low .14, there is no reason to believe that the smaller the male nasal visual field the greater should be his power reading. And, since we could expect two + r's by chance to be significant at the 5 per cent level, we must tentatively accept the last three null hypotheses. It seems that in general all these correlations fluctuate around zero,

as indicated by the low positive and negative correlations of males and females.

TABLE III

Correlations of Power Reading, Speed Reading and I.Q. with Size of Visual Fields in Several Dimensions

Males					
Directions	*Eye*	*r*	*N = 39 Power Reading r*	*N = 46 Speed Reading r*	*N = 75 I.Q. r*
Lateral	R	.61	-.22	-.03	.11
	L		-.12	-.04	.03
Nasal	R	.14	-.32	-.01	.10
	L		-.45	-.13	-.04
Upper	R	.62	-.26	-.08	-.10
	L		-.15	.12	-.11
Lower	R	.62	-.20	-.17	-.02
	L		.03	-.10	-.00

Females					
Directions	*Eye*	*r*	*N = 43 Power Reading r*	*N = 48 Speed Reading r*	*N = 69 I.Q. r*
Lateral	R	.64	.28	.15	.34
	L		.08	.15	.15
Nasal	R	.36	.21	.13	.22
	L		-.19	.02	.13
Upper	R	.62	.07	.24	.28
	L		.19	-.02	.34
Lower	R	.68	.20	.29	.18
	L		.23	.20	.12

Many studies in the past have emphasized the importance of peripheral vision in reading. Two main types of instruments to investigate peripheral vision—the perimeter and the tachistoscope—have been used. La Grone (5) used tachistoscopic exposure to obtain accuracy of perception in the left and in the right peripheral visual fields. He found that high perception scores in the left peripheral visual field tended to go with fast reading, high perception scores in the right peripheral visual field tended to go with slow reading. Tinker (6) commented that in tachistoscopically exposed material the long practiced habit of reading material from left to right is dominant. It is logical to infer that such a habit is more effective for good than for poor readers. Furthermore, a short exposure test of peripheral vision is not

an adequate measure of peripheral vision as it operates in the normal reading situation where the successive fields of vision overlap.

Summary and Conclusions

The perimeter was used to measure 155 children, age about 11. Scores of power reading, speed reading, and I.Q. were obtained. Findings for boys and girls were separately treated in the analyses of correlations of power reading, speed reading, and I.Q. with visual fields. Within the limits of the samples, the following conclusions may be drawn:

1. Significant sex difference exists in the sizes of the perimetric visual fields, boys' being about two degrees larger than girls'.

2. There is insufficient evidence of a significant difference between the sizes of the right and left eye visual fields.

3. There are no significant relationships between the width of the horizontal peripheral visual fields and power, or speed of reading.

4. There are no significant relationships between the width of the vertical peripheral visual fields and power, or speed of reading.

5. There are no significant relationships between I.Q. and size of peripheral fields.

The low correlations for power reading, speed reading, and I.Q. with visual fields fluctuate positively and negatively around the zero point. The manner of fluctuation depends on the particular sample measured.

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Guide Lines And Ground Rules Of Action Research

LEANDER L. BOYKIN

There is a growing recognition of research as one of the functions of the classroom teacher. Evidence is now available to indicate that teacher research is possible once appropriate attention is given to several general considerations. First, there must be removed the psychological barriers resulting from previously learned and acquired conceptions, beliefs, and ideas as to what constitutes research. Equally, and perhaps more important, there must be substituted a clear understanding of the nature and meaning of the term "research" and of "action research" with its tremendous possibilities and potentialities for studying the kinds of problems confronting teachers in their everyday classroom situations.

For the most part teachers have been taught to think of research as something for the scientifically minded, trained expert; something confined to a laboratory and performed under highly controlled conditions; something whose experimental design has to meet certain conditions. They have been given the impression that research was not research unless it involved such statistical concepts and terms as correlation, factor analysis, Chi square, analysis of variance, standard error of the mean, or test of significance. Little stress has been placed upon the idea that research is not the data, not the statistical formula, not the hypotheses and the conclusions—but a process, a method, a system, an activity.

Research Defined

Properly defined, research is a method of scientific inquiry, of problem solving, of reflective thinking. According to Whitney (3),

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> **. . . the methods of the best research are found to be scientific in problem solving, through critical examination of hypotheses to final tentative corroboration of generalizations and succeeding search for certainty as a basis for action. In fact, the careful thinker, whether in shop, office, or study, proceeds in terms of delayed action after a period of reflection, when evidence on solutions can be carefully weighed. This is the method of creditable research, in whatever field it is carried on.**

Research might also be defined as an "orderly system of searching for the truth which by basing conclusions upon factual evidence, and by using logic as a means of showing relationships between related ideas gives man better and more accurate answers to his many questions."(1) "Research is an endeavor to discover, develop, and verify knowledge. It is an intellectual process that has developed over hundreds of years, ever-changing in purposes and form, and always searching for the truth."(2) It is that activity which is directed toward the development of a science of behavior in educational situations.

It is doubtful whether the above concepts of research have been emphasized in classes enrolling teachers. Few teachers have been taught that research is nothing more than a method, a system, a process, or an activity.

The Meaning of Action Research

According to Corey (4), "action research" is "the process by which practitioners attempt to study their problems scientifically in order to guide, correct, and evaluate their decisions and actions." Action research is the process of defining a problem, hypothesizing actions, engaging in these actions, studying the consequences, and generalizing from them. It is a cooperative activity in which those who have similar or common problems plan with each other in deciding what their several problems are, which scientific problem to study, and how to go about studying it. It is a method by which is gathered evidence needed to help those engaging in action research to acquire more adequate perspective, more knowledge of, and more insight into their everyday working relationships, procedures, and practices. It is the testing in action, as scientifically as possible, of practices that give promise of improving education. It is the systematic search for evidence which when carefully recorded and interpreted helps to answer the question: "Did a particular action result in the desirable consequences that were anticipated?" It is a method of trying consciously to find out whether certain activities actually do lend to the results that were anticipated; the determination, as objectively as possible, whether the method used to ameliorate a difficult situation actually brings about improvement. It is the act of internalizing an experience, of changing behavior through

the process of learning to plan, think, and work together in the scientific attack upon practical problems.

The Design of Action Research

The significant elements of a design for, or the basic steps in, "action research" are:

1. **Problem Identification.** The awareness, discovery, or identification of a problem area about which an individual or group is sufficiently concerned to want to take some action regarding it.

2. **Problem Analysis and Selection.** Group selection of a problem; making certain that there is a real problem, not a gripe; that it is a problem of significance; is manageable, not long and drawn out, not beyond the competencies of the person involved; that it is practical, and not theoretical and can be solved within a reasonable period of time; that solutions can be addressed to the fundamentals, not the superficial; correcting the perspective of the problem, if necessary, and formulating it in such a way to be effective for study and research; working until a consensus is reached.

3. **Hypothesis Formulation.** Prediction that implies a goal and a procedure for reaching it; tentative ideas about crucial factors; viewing of the goal in relation to the total situation; prediction of what results will follow from what appears to be better practices; application of a more or less consciously formulated theory or system of beliefs.

4. **Experimentation and Formulating Action.** Further clarification of goals; cooperative planning of ways to obtain goals; gathering and interpreting data to sharpen ideas and develop action hypotheses; careful recording of actions taken and the accumulation of evidence to determine the degree to which goals have been achieved; the carrying out of an agreed upon plan of action.

5. **Evaluating the Results of Action.** Drawing inferences from the evidence; forming generalizations regarding the relation between the notions and the desired goal; the continuous re-testing of these generalizations in action situations.

While it is generally characteristic of action research programs for a faculty to undertake a common problem and to work together as a unit or team, such a procedure is not mandatory. Action research projects can be designed and carried on by faculty interest groups, individuals, departmental, class or grade groups, or entire faculties. Organized working units of any kind and size can engage in action research provided they have a significant problem and enough interest and concern to analyze, clearly

define, formulate hypotheses, gather relevant data, experiment and record their findings, and generalize the results.

Procedures and Problems

The action research procedure lends itself especially to the investigation and study of such problems as the following:

1. What are the opinions, attitudes, and concepts of teachers concerning administration? How do they feel about supervision? About faculty meetings? About visiting children's homes?

2. What differences in achievement would result from two different methods of teaching spelling? Reading? Arithmetic?

3. What differences would it make in achievement between a group taught by using audio-visual aids and one not so instructed?

4. What differences would it make in achievement between a group taught all day instead of taking time out for money raising projects and non-essential school activities?

5. How do children feel about their teachers? About the principal? About their classmates?

6. What are the real advantages and disadvantages of school consolidation? How do people really feel about it? The children?

7. What are the attitudes and feelings of teachers, principals, and others about action research?

8. What difference would it make in achievement if the father and not the mother signed the report card? What kind of reporting brings about more concern on the part of parents—cards, letters, or home visits?

9. What do parents think about and how do they feel about the school, and about the kind of teaching and learning that is going on?

To undertake action research projects, or to engage in action research programs, does not require a knowledge of higher mathematics, an esoteric vocabulary, or the ability to use certain high level statistics. Rather, the prerequisites are a genuine concern for doing something constructive about one's own problems or those of the group or school with which one is identified; a spirit of inquiry and a willingness to suspend judgment until all the facts are in and have been subjected to critical analysis and interpretation; and a general knowledge of the basic steps in the action research process.

Undoubtedly, the best way to learn how to engage in action research is to do it. Talking about, reading about, and studying examples of research studies done by others will help. But the key to action research is action—action research! Those who work with the process know that action research

seems difficult to comprehend and to translate from words, particularly in the initial stages. In order to learn to do action research one must: engage in concrete experiences to build up meanings; unlearn old patterns of thinking and establish new mental processes; discard old patterns of behavior and acquire new ones; acquire new and different techniques in leadership, skills in human relations, and the use of democratic procedures; establish new lines of communication among teachers. Also, time is most important. It takes time for individuals to learn to plan together, think together, and work together. Among the problems likely to be encountered are these:

1. Many of the initial meetings may not seem worthwhile.

2. Lack of feeling of responsibility for the success of meetings by some members of the group.

3. Assumption of too much responsibility by the status leader.

4. Lack of assurance that decisions made by the group will be carried out.

5. Lack of attention to and knowledge of methods of group work and democratic procedures.

6. Lack of knowledge of important terms, concepts, and necessary skills.

7. The feeling on the part of some that the whole action research process is a waste of time and effort.

8. The attitude on the part of some that they want a consultant or resource person to give demonstrations and answers to their questions and solutions to their problems.

9. Hostility within the group toward such things as reading, role playing, and other activities.

10. Sensitivity and hurt feelings over criticisms by some members of the group.

11. Lack of cooperation and lack of understanding on the part of those who should know and encourage action research.

Obviously, there are many things that could be said concerning the advantages of engaging in action research. It awakens the dormant powers and sets in motion the latent abilities, and undeveloped talents of teachers and other personnel. To engage in action research helps to solve problems, discover new facts, satisfy curiosity, diagnose difficulties, secure more accurate answers to questions, correct biases, eliminate prejudices, improve the curriculum, develop better human relations, increase one's love for teaching and growth, and renew one's faith in the capabilities and potentialities of boys and girls.

(Continued on page 78)

Current Uses Of Binet & Wechsler Tests By School Psychologists In California

PHILLIP WEISE

Since the first Wechsler Intelligence Test was introduced in 1947, there has been a controversy in professional literature contrasting the uses of the Wechsler Intelligence Test with the uses of the Stanford-Binet Intelligence Test (1-15).

These two tests represent perhaps the most frequently used test instruments of school psychologists today. In personal discussions with other private practicing clinical psychologists and school psychologists, the author has been unable to discern a definite pattern of specific uses for these tests. Studies regarding their uses and the advisability of interchanging the tests vary widely. At the California Association of School Psychologists' and Psychometrists' convention in 1959, Gale Beeman, school psychologist in Sacramento, reported a comparative study on the Wechsler Intelligence Scale for Children and the Stanford-Binet (2). Results of his study with a group of gifted 7 to 11-year old children indicate that the Binet and the Wechsler are not interchangeable in terms of I.Q., and have insufficient correlation to perform a development of an equivalent score. He suggests the use of a Binet for screening gifted children in this age group.

In order to obtain a more complete picture of the current uses of these tests in California schools, a modified forced choice type of questionnaire was devised and mailed to 100 school psychologists. Seventy-six were returned.

The questionnaire asked the psychologists to select the test they used most frequently for the following types of screening: (a) identification of gifted; (b) identification of mentally retarded; (c) learning problems (other

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than mental retardation); (d) emotional problems; (e) possible neurological problems; (f) other uses. In the areas of screening for giftedness and mental retardation, differentiation in terms of grade level was made as follows: kindergarten-2nd grade; 3-6th grades; 7-10th grades; 11-12th grades. A balanced sampling was mailed to cities with student population of 5,000 to 15,000; 15,001 to 25,000; above 25,000. Geographically, the State was divided into northern and southern sections with the city of Fresno as a dividing line.

Of the 76 returned questionnaires, representative sampling of cities of varying sizes was received. For the most part, psychologists were very definite in terms of likes and dislikes regarding the use of these tests for specific purposes. Only a small percentage used both Binet and Wechsler for any type of psychological screening. In general, the findings show little difference in the manner these tests are used in cities of varying sized school population.

TABLE I

Current Uses of Binet and Wechsler Tests by School Psychologists in California

Type of Problem	*North*			*South*			*Total*		
	Binet	*WISC*	*Both*	*Binet*	*WISC*	*Both*	*Binet*	*WISC*	*Both*
GIFTED									
Kindergarten - 2	83	17		74	26		78	22	
Grades 3 - 6	50	38	12	36	55	9	43	46	11
Grades 7 - 10	31	69		27	67	6	29	68	3
Grades 11 - 12	30	70		14	86		22	78	
RETARDED									
Kindergarten - 2	91	9		79	12	9	89	11	
Grades 3 - 6	24	76		29	66	5	26	71	3
Grades 7 - 10	12	84	4	17	75	8	14	80	6
Grades 11 - 12	9	91		8	83	9	7	89	4
DIFFERENTIAL DIAGNOSIS									
Learning Problems	9	77	14	7	85	8	7	83	10
Emotional Problems	3	87	10	9	79	12	6	83	11
Possible Neurological Problems		84	16	5	90	5	3	87	10
Other Uses		93	7	23	69	8	10	82	8

In the elementary schools in Northern California there is a definite favoring of the Binet for screening gifted. In kindergarten through 2nd grade, 83 per cent use the Binet and 17 per cent the WISC; in grades 3 through 6, 50 per cent use the Binet, 38 per cent the WISC, and 12 per cent use both. In contrast, Southern California reports: kindergarten to 2nd grade, Binet 75 per cent and WISC 25 per cent; grades 3 to 6, Binet 36

per cent, WISC 55 per cent, and both, 9 per cent.

In the North the Binet is used 91 per cent of the time for checking for mental retardation in kindergarten through 2nd; in the South, at the same grade level, only 79 per cent of the replies received indicate use of the Binet for testing retardation.

One might hypothesize that this difference may reflect direct or indirect influence of either Stanford University or former students of Terman.

Statewide, 78 per cent prefer to use the Binet for testing for giftedness in kindergarten through 2nd grade and 22 per cent prefer the Wechsler. In contrast, these two tests seem to be used almost equally for the same type of screening in grades 3 through 6—43 per cent Binet, 46 per cent Wechsler, 11 per cent both. At the secondary level, Wechsler Intelligence Tests are reported to be used approximately 75 per cent of the time when testing for giftedness is required.

School psychologists depend heavily on the Binet in testing kindergarten through 2nd grade children for mental retardation. For this purpose, 89 per cent reported they use the Binet, while 11 per cent use the Wechsler. The picture changes radically beyond this grade level, with only 26 per cent still using the Binet and 71 per cent using the Wechsler when determining mental retardation. The trend continues in this direction for such screening in secondary schools, with the Wechsler Tests being used from 80 to 90 per cent of the time, depending on the grade level. When differential diagnosis involves problems other than giftedness or mental retardation, 83 to 97 per cent of the psychologists reporting stated they use the Wechsler Tests as part of a battery of psychological tests.

It is interesting to note that in spite of the impact of the Wechsler Tests, 22 per cent of the psychologists use the Binet for testing for giftedness in grades 11 and 12, and 7 per cent use this test for determining retardation at the same grade level.

Many of the responses indicate a reaction of an emotional nature from a psychologist's viewpoint. Although the inherent weaknesses of both tests were frequently pointed out as the reason for or against their use in specific instances, the comments indicate that the training experience and biases of the psychologist play just as important a role as do these weaknesses in the final selection of which test to use. These are a few of the many comments made:

As someone once said—whatever the Binet lacks, when you give a Binet, you know what you have and while the WISC is quick, fun and easy, I would never certify an M.R. or give any important decision without a Binet.

The Binet is a different test each time it is given—any way you look at it. The standard deviations are different at different ages so that a high I.Q. is harder to get at some ages. The amount of performance I.Q. varies from year to year. It is very difficult (time consuming, etc.) to separate the verbal items. The test is awkward to give in many ways. For example, because a subject passes one kind of item at a high level, he has to be faced with those he clearly cannot pass at that high level.

The WISC does not appear to have a sufficient sample of items applicable to the year 8 and below M.R. groups to insure the measure is adequate for that group at the earlier ages: when educational decisions will be made from the testing.

In general, for clinical study I feel I have more when I use the WISC.

Binet: This is for the "academically gifted" in a verbally loaded program. WISC: WISC has more differential diagnostic information, perceptual clues, and clues to diagnose specific learning problems. It gives more results in the culturally or language different child.

We use Binet almost exclusively.

Scores on Binet appear more uniformly understood.

WISC is ordinarily used routinely—when a problem is encountered.

Binet Vocabulary sequence poor, culturally obsolete. Picture material and some toys are likewise very dated.

Prefer the WISC in most cases because they give a Performance as well as a Verbal score. Comparison of Vocabulary and Performance scores yields considerable clinical information.

For all around testing, the Binet seems to have more background for this type of analysis. Its numerous revisions and longer use has made it so.

Feel the WISC gives more but what it is, I'm not so sure.

Prefer the WISC, easier to administer, provides richer interpretation.

As an extension of this survey, the questionnaires were sent to 13 universities and colleges in the State of California which offer courses of study for the training of school psychologists and clinical psychologists. In the letter accompanying the questionnaire the University professors were asked specifically which test they would recommend for various types of diagnostic screening.

Eight schools returned the questionnaire and there was a wide variety of comments made. Unlike the comments made by the majority of school psychologists, the university and college comments cautioned of the danger of generalization and warned against the use of any isolated test for "any serious diagnostic purpose." Six of the schools specifically advised the use of a battery of tests for all the types of screening noted on the questionnaire.

All schools stated that they had taught the administration and scoring of both tests, two were non-committal and stated in general terms that each case differs, and thus the selection of either of these two testing devices would depend on the individual child rather than the express purpose of psychological testing. One recommended the Binet for the identification of the gifted at all grade levels and the Wechsler Tests for all other purposes; three preferred the Binet for gifted and retarded in the kindergarten through 2nd grade, an interchangeability for the same types of cases in grades 3rd through 6th, and an exclusive use of the Wechsler tests at all other grade levels, for all other psychological testing. One indicated exclusive use of the Wechsler tests and stated the Binet should only be used if a Wechsler Test had recently been given. One felt the tests were interchangeable at all levels for all purposes. The following comments may help to give a flavor for the feelings of college instructors regarding these tests:

The Binet is outdated . . . it seems a much less useful tool for children 9 or older.

Minor profile variations on the WISC are too unreliable to be useful in any diagnosis, but judged in a more global way by someone familiar with the test and the population tests, it has more promise than the Binet.

Since the WISC and Stanford-Binet are of roughly comparative reliability, we treat them as if equivalent. The decision of which to use in a given case hinges more on the needs and preferences of the referring source, the tests the child has had recently, and the nature of the particular problem, than on grade level.

I believe the younger gifted child would show his superiority verbally and this would be more completely explored with the Binet.

In screening for emotional problems, WISC tests offer better opportunities to make careful qualitative observations.

In identifying mentally retarded beyond 2nd grade level, WISC seems to be a better prognostic indicator.

Only use the Binet when the WISC has been given.

I would not give a general recommendation for either test.

In conclusion, this survey indicates that the Binet Test is preferred by school psychologists for the screening of children below 3rd grade level, for giftedness, and for mental retardation. The Wechsler Tests, however, proved to be most frequently used throughout the State for all other types of psychological appraisals beyond the 2nd grade.

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Guide Lines of Action Research . . .

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MEET YOUR CACER--2

(This is the second of a series of biographical sketches of the members of the California Advisory Council on Educational Research.)

Quiet, dignified, and brilliant—these characterize Harold Carter, a member of CACER since this group was organized over ten years ago. Quietness and dignity are, of course, personality traits which only those who have had the opportunity to know Dr. Carter can appreciate. His brilliancy is easier to identify and recognize, for he was elected to Phi Beta Kappa and Sigma Xi at the University of Minnesota from which he received his A.B. and Ph.D. degrees. Immediately after receiving his doctorate, he was associated with two exciting projects which utilized his specialties of psychology and statistics, in that he worked with Lewis M. Terman on twin resemblances and Edward K. Strong, Jr. on vocational interest research.

Since 1937 he has taught in the School of Education at the University of California at Berkeley, and he is currently Professor of Education at this institution. His teaching has been widely recognized, and consequently, other institutions, such as the University of Minnesota, Stanford University, Michigan State College, and California College of Arts and Crafts, have employed him on their summer school staffs.

Dr. Carter is affiliated with many professional organizations, including the American Psychological Association, the Society for Research in Child Development, the American Educational Research Association, the California Educational Research Association, the National Society for the Study of Education, and CACER.

It is, perhaps, through his writing that Dr. Carter's abilities are best recognized. The list of periodicals, publications, and research is so voluminous that only the most recent may be noted. Dr. Carter was the author of the review on Gifted Children in the third edition of the Encyclopedia of Educational Research (1960). His California Study Methods Survey is acknowledged as one of the most thoroughly validated instruments of its kind. He is considered an authority on research on study habits and associated attitudes.

But, Harold Carter is not an "ivory tower" man. In his spare time he finds time to ice skate and do gardening. He thoroughly enjoys folk dancing and ballroom dancing, and is very adept at both. However, his real "love" is deep sea fishing, and, like all fishermen, he can easily be persuaded to tell you about the time off the Golden Gate that he hooked a 44-pound Chinook—which, incidentally, did not get away.

A Comparison of the Achievement Of Three Academic Groups

First Follow-up Study

DONALD F. HARDER

This is the second report of a study (4) designed to trace the academic achievement of three groups of students: (1) Students awarded Honors at Entrance recognition upon enrollment at the University (HAE); (2) High Potential Freshmen, or new students scoring in the top decile on a test of scholastic aptitude required of all new students of less than junior standing (HPF); (3) A control group randomly selected which conformed to the total incoming group with respect to sex distribution and mean score and variance on the test of scholastic aptitude (CG).

This study covers a span of two full academic years—four semesters. Subjects were grouped according to their initial classification and were placed into subgroups according to whether they completed one, two, three, or four semesters of work.

Method

Means and standard deviations for each subgroup and for each variable were calculated. *F* and *t* ratios were computed between "lost" and "retained" students, between HAE and HPF students at each semester point of the study, and for variables of academic aptitude, reading, and grade point average. Where the *F* ratio was significant, Cochran and Cox's (2) approximation of *t* was used. Where *F* was not significant, the *t* test was computed by basing the standard error of the difference upon the pooled sums of squares and degrees of freedom (3). Numbers and percentages of men and women for each subgroup and for totals were computed.

Donald Harder is an Assistant Professor of Education at the University of California, Davis. He has been at that institution for four and a half years, and served as Supervisor of Testing and Counseling before assuming his present position. Prior to that time he served at the University of California, Los Angeles, as senior counselor and as lecturer in psychology. Dr. Harder obtained his Ed.D. degree from the University of Kansas in 1952. This article is the second of a planned series of studies.

Results

Means and standard deviations of each variable and for all subgroups are shown in Table I.

TABLE I

Means and Standard Deviations of Five Variables for Three Groups

Semesters Completed	*HAE*		*HPF*		*Control*	
	$\bar{X}$	*S.D.*	$\bar{X}$	*S.D.*	$\bar{X}$	*S.D.*
1						
ACE	135.0	5.72	144.7	7.28	117.8	8.70
Read	60.0	3.74	65.3	5.67	63.0	3.16
Units	15.0	1.87	15.4	1.51	14.6	2.65
GP	36.5	10.14	35.4	12.99	25.3	12.80
GPA	2.43	0.56	2.30	0.89	1.73	0.96
2						
ACE	136.1	18.80	149.6	10.53	107.4	15.51
Read	65.6	9.05	69.9	8.77	55.7	7.36
Units	30.9	3.08	29.7	3.54	29.0	1.90
GP	99.6	27.17	79.9	31.03	57.4	16.20
GPA	3.22	0.68	2.67	0.82	1.98	0.50
3						
ACE	117.5	25.27	149.7	8.02	119.4	7.55
Read	63.0	8.11	69.3	7.62	60.0	2.53
Units	46.5	3.14	46.5	4.90	44.8	2.13
GP	131.2	41.40	116.3	27.43	102.4	31.38
GPA	2.82	0.76	2.50	0.44	2.29	0.60
4						
ACE	127.6	14.24	147.6	7.93	117.3	11.58
Read	66.6	6.45	71.0	8.53	61.5	5.64
Units	61.8	3.68	62.4	4.43	59.5	2.63
GP	183.6	34.36	173.1	38.47	145.5	26.01
GPA	2.97	0.46	2.77	0.53	2.45	0.37

A study of this Table reveals several interesting findings. First, only two of the twelve subgroups attained an average grade point average below that which is acceptable, i.e., 2.00, and these were earned by students in the control group who dropped out after one or two completed semesters. Second, the only subgroup to attain a 3.00 or better average was the Honors (HAE) group which left school after completing two semesters. Third, there is an irregular but noticeable drop in average ACE scores for the HAE groups as the number of semesters increases. The reader may wish to make additional observations.

Of interest to some may be the question of whether those students who dropped out prior to completing four semesters are in any measurable way different from those who did complete four semesters. Table II shows the results of *t* tests between the "lost" and "retained" students on each of three variables.

TABLE II

Significance of Differences Between "Lost" and "Retained" Students of Three Groups on Three Variables

Groups		*ACE*		*Reading*		*GPA*	
	N	*Diff/Means*	*t*	*Diff/Means*	*t*	*Diff/Means*	*t*
HAE							
Lost	22						
Retained	40	1.9	0.30	3.7	1.30	0.15	0.96
HPF							
Lost	35						
Retained	36	0.4	0.19	2.8	1.40	0.28	1.40
Control							
Lost	27						
Retained	36	2.4	0.72	1.9	1.88	0.19	1.49

None of the *t*'s is significant, which suggests that there are no differences between students who drop out and students who are retained with respect to measures of scolastic aptitude, reading ability, and average grades.

A comparison of Honors at Entrance students and High Potential students at various levels of completed semesters is shown in Table III.

There are no significant differences between the groups in terms of grade point averages, even though for each comparison the actual differences are in favor of the Honor students (see Table I). A significant difference in reading ability is shown only for the retained High Potential students. As for the average scholastic aptitude scores, there are significant differences in favor of the High Potential students, the magnitude of *t* increasing with each semester completed.

Table IV was prepared to give a breakdown by number and by sex of the various groups according to the number of semesters completed. Several significant facts seem to stand out.

TABLE III

Significance of Differences Between HAE and HPF Students on Three Variables and for Different Numbers of Semesters Completed

Semesters Completed		*N*	*ACE Diff/Means*	*t*	*Reading Diff/Means*	*t*	*GPA Diff/Means*	*t*
1	HAE	3	9.7	1.81*	5.30	1.33	0.13	0.19
	HPF	7						
2	HAE	10	13.5	2.30*	4.4	1.20	0.55	1.73
	HPF	17						
3	HAE	8	32.2	3.74**#	6.3	1.64	0.32	1.0
	HPF	11						
4	HAE	40	20.0	7.35**	4.4	2.51*	0.20	0.99
	HPF	36						

*Significant at .05 level
**Significant at .01 level
#Approximation of *t* (Cochran and Cox)

TABLE IV

Numbers and Per Cents of Students in the Various Groups Classified as to Sex

Groups	*Initial*		*Completed 1 Semester*		*Completed 2 Semesters*		*Completed 3 Semesters*		*Total Lost*		*Completed 4 Semesters*	
HAE	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*
M	14	23	1	7	0	0	1	7	2	14	12	86
F	48	77	3	6	10	21	7	15	20	42	28	58
T	62		4	6	10	16	8	13	22	35	40	65
HPF												
M	31	44	2	6	8	26	3	10	13	42	18	58
F	40	56	5	13	9	23	8	20	22	55	18	45
T	71		7	10	17	24	11	15	35	49	36	51
Control												
M	23	37	3	13	3	13	1	4	7	30	16	70
F	40	63	1	3	15	38	4	10	20	50	20	50
T	63		4	6	18	29	5	8	27	43	36	57
Totals												
M	68	35	6	9	11	16	5	7	22	32	46	68
F	128	65	9	7	34	27	19	15	62	48	66	52
T	196		15	8	45	23	24	12	84	43	112	57

Without exception, the percentage of men is less than the percentage of women in each group at the beginning of the study. At the conclusion of four semesters, the percentage of men is greater in each group. Of perhaps greater significance is the attrition shown in the total drop-out column of Table IV. Of the total number at the beginning of the study, 43 per cent dropped out before completing four semesters. Drop-outs for the HAE, HPF, and Control groups are 35 per cent, 49 per cent, and 43 per cent, respectively.

Discussion

In the earlier study it was suggested that honor students from high school tend to continue high level achievement in college because of high motivation and adequate study skills. The data now suggest that these are not sufficient compensation for lack of high scholastic aptitude, and that it takes all three factors to maintain consistent high level achievement.

A brief survey of the students leaving the campus after two semesters suggests that the drop-outs probably do not terminate their college work. Of the 57 students investigated at the end of the second semester, 33 had requested transcripts, and of this number only 12 had below a 2.00 grade average. Colleges to which transcripts were sent ranged from junior colleges to universities in this and other states.

Women make up the highest proportion of the drop-out groups. Of the 128 women in the initial study, 62, or 48 per cent, did not complete four semesters. For the men the figure is 32 per cent. The difference in drop-out rate is most significant in the HAE group, with 14 per cent of men and 42 per cent of women failing to complete four semesters.

This difference in rate may have several explanations. It is fairly well established that women get higher grades than men in high school, and that higher grades do not reflect superior ability (1). It is entirely possible that factors other than ability which contribute to grades earned in high school are not considered in the assessment of college achievement. Failure to attain high grades in college may stimulate considerations of transfer. Yet, on the whole, this does not seem to be a sufficient reason in view of the average grade achievement of the drop-out groups.

A second, and perhaps more valid explanation, would be that many of the women who left did so in order to take advantage of curricula not available on this campus. A case in point would be the elementary teacher credential program, which was not available at that time. Should this be a valid reason, a higher retention among women students can now be anticipated, since the program has been initiated. There may be other curricula which, if offered, would increase the retention of women students.

Marriage, finances, and cultural advantages elsewhere probably account for some of the drop-outs, but the numbers affected are not known.

As in the first study, the HAE students maintain grade average superiority over other groups, but the difference is diminishing. The greatest increase occurred with the control group, and now the average approaches or equals the all-campus average of 2.45. Even though the average of the high potential students shows a steady increase, still it is not as high as one might expect in view of the high measured potential. Reasons for this given in the first report may still hold—low motivation and inadequate study skills. Perhaps the most significant finding for this group is that they leave the campus in greater proportions than any other group. Of a total of 71 at the beginning of the study, only 36, or 51 per cent, remained for four semesters. For some reason, nearly half of the students who should be among the most productive on campus are being "lost."

Of the 196 students at the beginning of the study, 112 completed four semesters. The percentage drop-out was 43. Since the percentage drop-out for the control group was 43, it does not seem unlikely that this may represent an all-campus attrition rate. According to an unofficial estimate for one group entering the university, the rate of attrition for a four-year period was about 49 per cent. Further data were not available at the time of the study.

It would appear that college personnel should be more concerned about the drop-out rate of the high potential students, for it is from this group that one might expect performance which would reflect most credit to the university and which would contribute most to national manpower (brainpower) needs. It is suggested that institution of the following procedures would lead to a significant reduction in the number of such students who are now "lost."

1. Early identification through aptitude testing. Many institutions of higher learning now require aptitude test scores for most students, but the usual practice is to file the results and to consult the scores only when the student has encountered academic difficulty. Identification at the earliest possible moment would be helpful, even though present methods are not wholly adequate.

2. Personal and regular contact with faculty members. Small groups of students could be assigned to interested and selected members of the faculty in order to provide personal and continuous consultation on matters relating to academic and personal-social development of the student.

3. Professional psychological counseling at first sign of low achievement and remedial treatment as required. The provision of counseling services and other remedial programs is rather taken for granted on most campuses, but in many cases such services are not adequately staffed or equipped for their responsibilities, nor are students and faculties fully informed as to the services offered.

The above proposals do not seem excessive in view of the available

facilities, and their implementation is entirely within the field of college responsibilities.

Summary

This report is concerned with the continued progress of three academic groups originally studied upon completion of one semester of college work (4). The original three groups were divided into subgroups according to whether they had completed one, two, three, or four semesters of studies. Comparisons were made between the "lost" and "retained" students and between Honors At Entrance and High Potential Freshmen students, according to the number of semesters completed. Sex differences in retention were ascertained.

As in the first report, it was found that, although the HAE students still retain a numerical advantage in grade point average over the HPF students, the difference is no longer statistically significant. Students who left the university prior to completing four semesters were in no measurable way (ACE, Reading, GPA) significantly different from those who completed four semesters.

Retention of men was in all cases greater than for women. Drop-out rate was greatest for the HPF group (49 per cent), followed by the Control group (43 per cent), and the HAE group (35 per cent). With the exception of the Control students who left after one or two semesters, no group of students left with a grade point average of less than passing (2.00).

It is suggested that the retention of greater numbers of high potential students would be advantageous to the university and to the nation, and procedures to accomplish this are proposed.

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An Evaluation of the Case Conference Method

JACK THOMPSON AND CARMEN J. FINLEY

The case conference method in education is an approach to the understanding of children which stresses teamwork by bringing together different disciplines and points of view. Through a cooperative effort and the sharing of understandings and information, positive steps may be taken to help a child. The person of prime importance in a case conference is the classroom teacher. He is the one who, after recommendations are made by the group, is in the best position to follow through. He is also the one who has to be personally concerned each day with the child's problems. In using the case conference method as an approach to the understanding of children, the question arises as to how the teacher perceives its value to him. This article is concerned with the value of the case conference method in helping the teacher to cope with classroom problems.

No specific research studies concerned with an evaluation of the case conference method were found in reviewing the literature. This seemed surprising in view of the emphasis placed upon such an approach within an educational setting.

This study has certain limitations, as follows: (1) the sample was small; (2) no controls were used; (3) there is a possible lack of objectivity in the questionnaire; and (4) the use of case conferences involved only one guidance consultant. (The teachers may be evaluating the person and not the method.)

Subjects

The subjects of this study consisted of 35[1] teachers from 15 school

[1]The original sample consisted of 36 teachers, but one teacher could not remember the case conference she participated in and had to be eliminated from the study.

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Carmen Finley is Director of Research for the Sonoma County Schools and has had experience as a teacher and school psychologist. Miss Finley obtained her master of arts degree in 1952 from Teachers College, Columbia University.

districts in Sonoma County who participated in one or more case conferences during the school years 1956-58. For the purpose of this study a case conference was defined as a pre-planned meeting in which a core of the following professional persons participated: teacher, administrator, elementary consultant, and guidance consultant. Other persons, i.e., nurse or parent, may have been involved in some of the case conferences, but in order to be consistent in the design, they were not considered part of the core. The case conference was initiated by the guidance consultant after an individual child study was made. The types of problems being considered were varied, i.e., emotional, mental retardation, or educational retardation. The types of problems were not differentiated in the design, as the purpose of the evaluation was directed toward the method rather than the problem area.

Method

The evaluation of the case conference by the teacher consisted of a two-part questionnaire conducted at one interview. In the first part, the teacher responded to items giving value judgments on a 5-point scale. In the second part of the questionnaire, each teacher was interviewed by one of the writers who did not participate in the case conferences. The teachers were then asked to respond to open-end questions.

On Part I of the questionnaire the mean and standard deviation were obtained for each question. Then a Chi square test was used to determine the degree of significance between certain items.

On Part II, responses to the questions were grouped into categories in terms of frequency of response by the teacher.

Results

In Table I, Part I of the questionnaire is reproduced and the frequencies obtained for each question on the 5-point scale are shown along with their respective means and standard deviations.

It is of interest to note that the highest ratings were obtained on question 3 where both the guidance consultant and the teacher obtained average ratings of 4.24 regarding the extent to which it helps to have these people involved in the conference. The lowest average rating was obtained in question 4c indicating that teachers felt the least value was obtained through use of the written report alone.

In addition, these same three questions are among those showing the least amount of dispersion.

Table II summarizes the results of the Chi Square tests. Only question 4, which rates the effectiveness of the three approaches: (1) case conference

TABLE I

Questionnaire on Case Conference Method, Part I Frequencies, Means and Standard Deviations Obtained on Five-Point Rating Scale

Question	*Degree of Helpfulness*					*Mean*	*S.D.*
	1 no	*2 little*	*3 moderate*	*4 very*	*5 extremely*		
1. To what extent does the case conference help you with the individual child?							
a. To provide further information on him.	2	4	6	13	7	3.59	1.16
b. To better understand him.	2	4	9	11	6	3.47	1.14
c. To better cope with him in the classroom.	5	8	10	5	4	2.84	1.25
2. To what extent does the case conference method help you with other children?							
a. To better understand them.	3	7	11	12	5	3.12	1.19
b. To better cope with them in the classroom.	4	8	8	7	5	3.03	1.28
3. To what extent does it help to have the following professional persons involved in the case conference?							
a. guidance consultant	0	0	8	9	16	4.24	.83
b. elementary consultant	1	2	10	9	10	3.78	1.07
c. administrator	1	0	5	13	11	4.10	.92
d. teacher	0	0	6	7	12	4.24	.83
e. nurse	2	1	10	9	5	3.52	1.09
4. In attempting to understand and help an individual child, rate the effectiveness of the following approaches:							
a. case conference method	0	2	6	11	14	4.12	.93
b. conference with guidance consultant alone	0	3	14	7	2	3.31	.79
c. written report alone	5	9	12	1	0	2.33	.83

method, (2) conference with guidance consultant alone, (3) written report alone, was significant. But this was highly significant (.001 level), hence the 3 parts (a, b, and c) were further compared by pairs to determine more nearly the relationship of the parts.

The greatest difference in rating was between the case conference method and the written report alone. This relationship remained at the .001 level of significance. While the comparisons between the case conference method and the conference with guidance consultant alone, and

between the conference with guidance consultant alone and the written report alone, were still significant, the levels of significance were .02 and .01 respectively.

Two inter-question comparisons were also made: 1b with 2a (the extent to which the case conference helps in understanding the child being compared with the extent to which the case conference helps in understanding other children) and 1c with 2b (the extent to which the case conference helps to cope with the child in the classroom compared with the extent to which the conference helps in coping with other children). Neither of these was significant.

TABLE II

Results of Chi Square Tests Made on Part I of Questionnaire

Question Number	X^2	*d.f.*	*Significance Level*
1a, 1b, 1c	9.44	8	not
2a, 2b	.72	4	not
3a, 3b, 3c, 3d, 3e	8.92	8	not
4a, 4b, 4c	46.79	8	.001
4a, 4b	12.62	4	.02
4a, 4c	33.49	4	.001
4b, 4c	14.69	4	.01
1b, 2a	2.16	4	not
1c, 2b	.80	4	not

Although the highest average ratings were noted earlier in question 3, the ratings obtained by *all* professional persons in this category were not statistically different when considered as a group.

As indicated in Table III, the teacher responses to the open-end questions seem to cluster around certain areas. Some tentative statements can be made regarding the case conference method in terms of its value, limitations, and structure.

1. The case conference helps the teacher understand the child better.

2. The case conference helps the teacher by substantiating her judgment or by giving her support regarding the child.

3. The case conference is superior to a written report alone. None of the teachers indicated they would like a written report alone without the case conference.

4. About half the teachers indicated that the guidance consultant should be the leader in the case conference. Some of the teachers felt that

it should be an informal meeting or that another professional person, i.e., administrator, elementary consultant, or teacher, should be the leader.

5. The participants in the case conference should be a core of at least four professional persons: teacher, guidance consultant, administrator, and elementary consultant. The parent and nurse were also mentioned, but not as frequently as the other four.

6. The teachers state that the case conference, in general, is fine as it is, although they would like more specific helps and follow-ups.

7. The case conference is felt to be most helpful with emotional problems, although it is also useful with other types of problems.

8. The teachers indicate a need for further case conferences as a part of the follow-up. This follow-up should evaluate the effects of recommendations made in the original case conference, or involve the parents in some cases.

9. The results of the case conference should be better understanding of the child, changes in the child's behavior, and specific helps in coping with the child.

10. The teachers indicate that a conference with the guidance consultant alone should occur only under certain circumstances such as follow-up or before the case study is started. Some of the teachers felt there was no need for a conference with the guidance consultant alone, or they didn't know when such conferences, if any, should take place.

Discussion

In general, the case conference method is considered to be helpful to the teacher; it helps him to understand the child better and to cope with him in the classroom. The case conference seems to give some teachers support or to substantiate their judgment regarding an individual child. This may make the teachers feel more secure when dealing with the child in the classroom.

Although the case conference is helpful, teachers indicate they would like more follow-up and specific help. The former might be considered somewhat typical when guidance consultants are confronted with a large case load and other duties. The latter suggestion is more difficult to evaluate. Two factors may be in operation:

1. The guidance consultant is unable to make specific recommendations because of limited understanding of the classroom situation.

2. The teacher may be asking for specifics from other persons when the guidance consultant's philosophy is that these specifics need to come

TABLE III

Frequency of Teacher Response to Open End Questions

Question	*Frequency*
1. In what way, if any, was the case conference helpful to you?	
a. better understanding of the child	20
b. substantiate or support teacher judgment	7
c. little or no help	3
d. specific helps	2
e. give different viewpoint	2
f. don't know	1
2. In what way could the case conference be more helpful to you?	
a. fine as it is	11
b. more specific helps	6
c. more follow-up	6
d. less time between test and conference	3
e. don't know	3
f. child observed by guidance consultant	2
g. no help	1
h. other	3
3. In what kinds of problems do you feel the case conference is most effective?	
a. emotional	14
b. any problem	5
c. intellectual functioning	4
d. discipline	3
e. behavior	3
f. other	4
g. depends on problem	2
4. How effective is the case conference as compared to a written report alone?	
a. case conference superior	32
b. need both	3
5. Who do you feel should participate in case conferences?	
a. teacher	35
b. guidance consultant	29
c. administrator	23
d. elementary consultant	21
e. parent	5
f. nurse	4
g. nurse (depending on the problem)	3
h. parent (depending on the problem)	3
i. administrator (depending on the problem)	2
j. elementary consultant (depending on the problem)	2
6. Do you feel it would be necessary or helpful to have a follow-up case conference?	
a. yes	24
b. depends on case	7
c. no	2
d. don't know	2
7. If so, what type of follow-up would be most effective?	
a. evaluate effects of recommendation	12
b. further case conferences	9

TABLE III (Continued)

Question	*Frequency*
e. conference with parents	5
d. don't know	3
e. observation	2
f. other	4
8. Whom do you feel should take the leadership role in a case conference?	
a. guidance consultant	17
b. informal, no leader	6
c. administrator	4
d. elementary consultant	3
e. teacher	3
f. person knows child best	2
9. What do you think should be the outcomes from a case conference?	
a. changes in child's behavior	11
b. better understanding of child	10
c. specific helps	10
d. other	4
10. Under what circumstances, if any, would a conference with the guidance consultant alone be more helpful?	
a. follow-up	7
b. before case study	7
c. none	6
d. don't know	6
e. depends on problem	3
f. specific helps	2
g. other	4

from the person involved in the situation. This may indicate differences in training, personality, or approach to learning.

There seems to be no doubt as to the effectiveness of the case conference as compared to the written report alone. This is the only significant item on the rated questions. This would indicate that more emphasis should be placed upon the case conference method.

Participants in the case conference should be the guidance consultant, elementary consultant, administrator, and teacher. Whether other persons participate depends on the individual case.

The case conference could be used with all types of problems; though, for the classroom teacher it seems most effective with emotional problems. This emphasis upon emotional problems may be due to their complexity and the teacher's continual frustration in dealing with them on a day-to-day basis in the classroom.

Leadership in the case conference seems to be a responsibility of the guidance consultant. The completion of the original case conference does not mean he is finished with the case. The teacher wants more follow-up conferences to evaluate the effects of the remedial action.

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Do Teachers Read About Reading?

DELWYN G. SCHUBERT

Reading always has been recognized as a process almost synonymous with learning. Because this is so, one would expect all teachers to evince a strong interest in reading. They should want to learn all they can about it. Their professional libraries should contain authoritative books on the subject, and they should subscribe to professional journals that carry articles about reading. But do they?

In an attempt to answer the foregoing questions, as well as several related ones, the writer enlisted the help of 132 experienced teachers in California and Washington. These teachers were enrolled in the author's courses in reading during the spring and summer sessions of 1959 and were in attendance at Los Angeles State College of Applied Arts and Sciences and Central Washington College of Education, respectively. They were asked to survey their personal libraries for professional books dealing with reading. At a subsequent class meeting these teachers responded anonymously to the following questions:

1. **Are you an elementary (grades 1-6) or secondary (grades 7-12) teacher?**

Ninety-eight elementary teachers and thirty-four secondary teachers were involved.

2. **How many years have you taught?**

The elementary teachers in this study averaged 5.2 years teaching experience; the secondary teachers, 4.8 years.

3. **How many professional books on reading did you own at the beginning of this course?**

Elementary teachers averaged 2.3 professional books on reading and the secondary teachers, .91. Of the elementary group, 20.4 per cent—in comparison with 35.3 per cent of the secondary group—reported owning no books dealing with the subject of reading.

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4. How many professional books on reading have you bought and later discarded or resold?

The elementary teachers averaged .49 disposals or resales; the secondary group, .10.

5. Do you feel you would profit from owning a greater number of professional books on reading?

This question was answered affirmatively by 67.7 per cent of the elementary teachers and negatively by 30.6 per cent. Two of the elementary teachers failed to respond. Of the secondary group, 91.2 answered affirmatively and 6 per cent negatively. One secondary teacher responded with a "maybe."

6. To how many professional journals that carry articles in reading do you subscribe?

The elementary teachers averaged 1.6 journals and the secondary teachers, 1.2. Thirty-eight per cent of the elementary teachers and 32 per cent of the secondary teachers reported subscribing to no journals that carried articles about reading.

Elementary and secondary teachers in this study do not differ greatly in the number of periodicals on reading to which they subscribe. They do differ, however, very significantly in the number of professional books about reading that they own. Individually, the elementary teachers possess about two and one-third times more books than the secondary teachers. This finding might encourage one to conclude that elementary teachers are more interested in the reading process. But it must be remembered that courses and textbooks dealing with the subject of reading are required of elementary teachers. College students who become junior and high school teachers hardly ever are required to carry professional courses in this area. Neither, of course, are they required to buy textbooks pertaining to reading.

Responses to questions four and five would tend to support a contention that secondary teachers have a greater appreciation for professional books about reading than do elementary teachers. The average elementary teacher, in comparison with the average secondary teacher, disposed of approximately five times as many books in this area. (This disposal figure seems important, since the average elementary teacher owned only two and one-third times more books than did the secondary teacher.) Further, the secondary teachers, as a group, were almost unanimous in their feeling that they would profit from owning a greater number of professional books on reading, while only two-thirds of the elementary teachers expressed such an interest.

In summary, there appears to be a strong awareness of the importance of knowing more about reading on the part of junior and senior high school teachers. Although they don't own as many professional books about read-

ing as elementary teachers, they are more inclined to keep those they have. And even more gratifying is the fact that they feel they could profit from owning more.

Although teachers have access to public, university, and college libraries they are not absolved of the responsibility of building up a personal library of journals and authoritative books that deal with a process as important to learning as reading. One would be suspicious, indeed, of the medical doctor or lawyer who practiced his profession without the finger-tip accessibility of literature relating to his work.

It is heartening to find that our teachers, as a whole, subscribe to periodicals and own books which deal with the basic process of reading. One cherishes the hope, of course, that the number of these periodicals and books will continue to grow.

Case Conference Method . . .

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The teachers seemed confused over the question of the conference with the guidance consultant alone. They are significantly in favor of a case conference as compared with a conference with the guidance consultant alone. Although they feel a conference with the guidance consultant alone might be helpful in initiating the case study or in follow-ups, enough teachers responded "don't know" to the question to indicate some confusion regarding the role of the guidance consultant in this type of conference. This may, in part, be due to recent changes in the function of the guidance consultant, in the settings in which the writers work. The changes consisted of de-emphasis on a previous lengthy referral form and a meeting between teacher and guidance consultant before a case study is initiated. Also, the teachers may not perceive an informal discussion with a guidance consultant regarding a child as a conference.